

# General purpose (dual digital transistors)

## UMA1N / UMB1N / UMB5N / FMA1A / IMB1A / IMB5A

●Features

1) Two DTA124E chips in a UMT or SMT package.

●Absolute maximum ratings (Ta = 25°C)

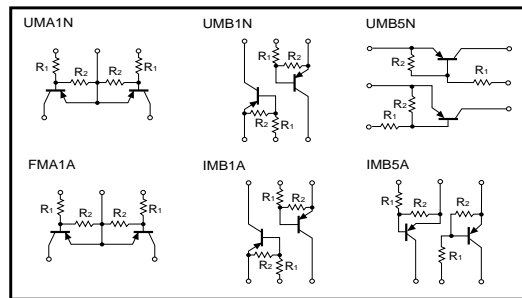
| Parameter            | Symbol           | Limits     | Unit  |
|----------------------|------------------|------------|-------|
| Supply voltage       | V <sub>cc</sub>  | -50        | V     |
| Input voltage        | V <sub>IN</sub>  | -40        | V     |
|                      |                  | 10         |       |
| Output current       | I <sub>o</sub>   | -100       | mA    |
| Power dissipation    | Pd               | 150(TOTAL) | mW *1 |
|                      |                  | 300(TOTAL) |       |
| Junction temperature | T <sub>J</sub>   | 150        | °C    |
| Storage temperature  | T <sub>stg</sub> | -55 ~ +150 | °C    |

\*1 120mW per element must not be exceeded.  
\*2 200mW per element must not be exceeded.

●Package, marking, and packaging specifications

| Part No.                     | UMA1N | UMB1N | UMB5N | FMA1A | IMB1A | IMB5A |
|------------------------------|-------|-------|-------|-------|-------|-------|
| Package                      | UMT5  | UMT6  | UMT6  | SMT5  | SMT6  | SMT6  |
| Marking                      | A1    | B1    | B5    | A1    | B1    | B5    |
| Code                         | TR    | TN    | TR    | T148  | T110  | T110  |
| Basic ordering unit (pieces) | 3000  | 3000  | 3000  | 3000  | 3000  | 3000  |

●Circuit schematic



●Electrical characteristics (Ta = 25°C)

| Parameter        | Symbol                         | Min. | Typ. | Max.  | Unit | Conditions                                     |
|------------------|--------------------------------|------|------|-------|------|--|
| Input voltage    | V <sub>I(off)</sub>            | -    | -    | -0.5  | V    | V <sub>cc</sub> = -5V, I <sub>o</sub> = -100μA |
|                  | V <sub>I(on)</sub>             | -3   | -    | -     | V    | V <sub>o</sub> = -0.2V, I <sub>o</sub> = -5mA  |
| Output voltage   | V <sub>O(on)</sub>             | -    | -0.1 | -0.3  | V    | I <sub>o</sub> /I <sub>c</sub> = -0.5mA/-10mA  |
| Input current    | I <sub>i</sub>                 | -    | -    | -0.36 | mA   | V <sub>i</sub> = -5V                           |
| Output current   | I <sub>O(off)</sub>            | -    | -    | -0.5  | μA   | V <sub>cc</sub> = -50V, V <sub>i</sub> = 0V    |
| DC current gain  | G <sub>i</sub>                 | 56   | -    | -     | -    | V <sub>o</sub> = -5V, I <sub>o</sub> = -5mA    |
| Input resistance | R <sub>i</sub>                 | 15.4 | 22   | 28.6  | kΩ   | -  |
| Resistance ratio | R <sub>z</sub> /R <sub>1</sub> | 0.8  | 1    | 1.2   | -    | -  |

●External dimensions (Units : mm)

